

Headquarters U.S. Air Force

Integrity - Service - Excellence

AFI 99-103

Capabilities-Based Test & Eval



HQ USAF/TE
Directorate of Air Force
Test & Evaluation

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Purpose

- **AF T&E Policy Development**
- **Seamless Verification Concept**
- **Discuss Other AF T&E Policy Updates**



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HQ AF/TE

AF T&E Policy OPR

Directorate of Test and Evaluation AF/TE



Director, Mr. Manclark
Deputy Director, Mr. Hamilton

Policy and Programs AF/TEP

Chief, Col Tye

- Test Policy
- Test Programs

Special Programs AF/TEZ

Chief, Mr. Altman

Resources and Infrastructure AF/TER

Chief, Ms. Grace

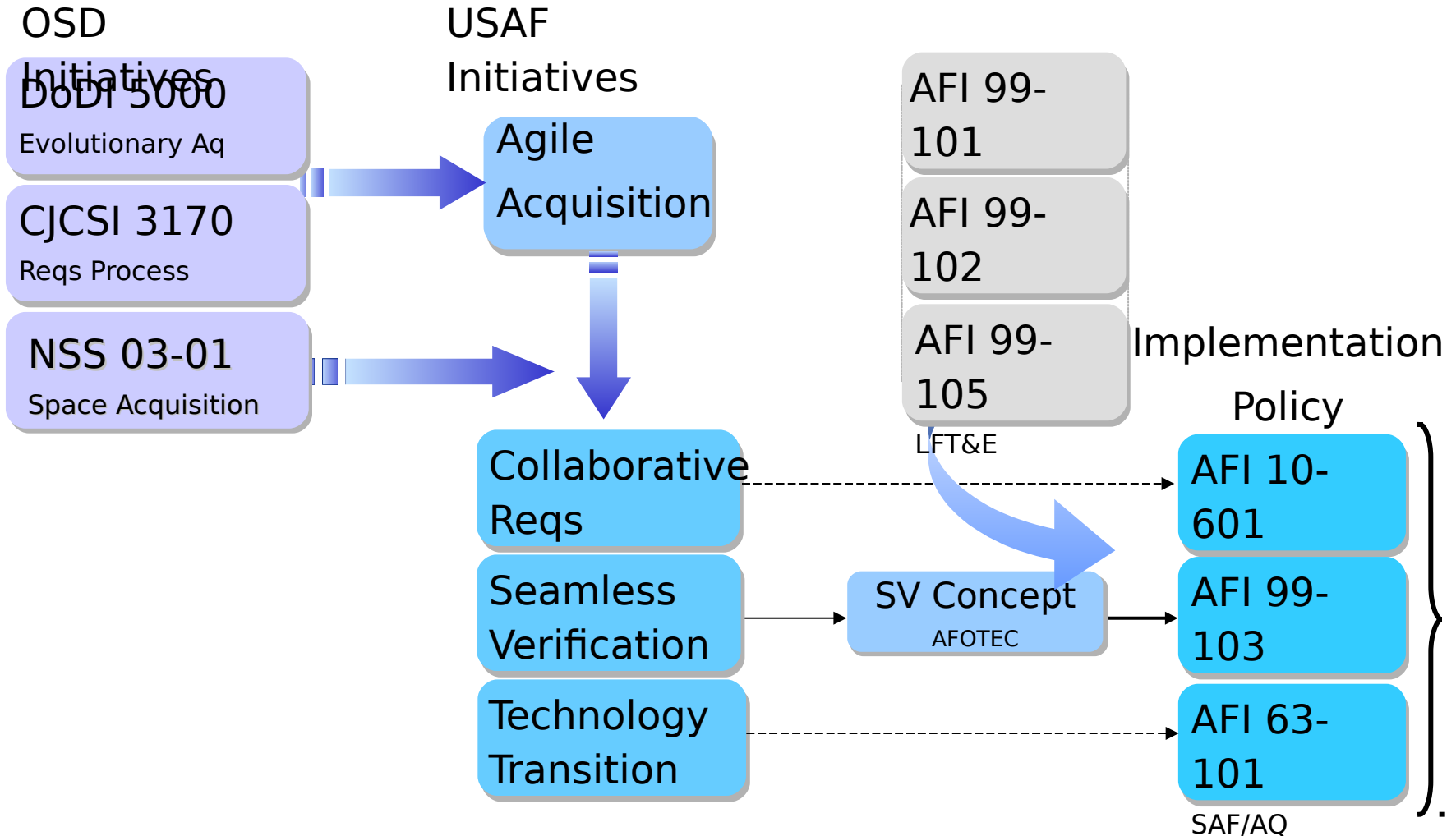
- Test Resources
- Test Infrastructure

- FM Policy
- FM Programs



T&E Policy Development

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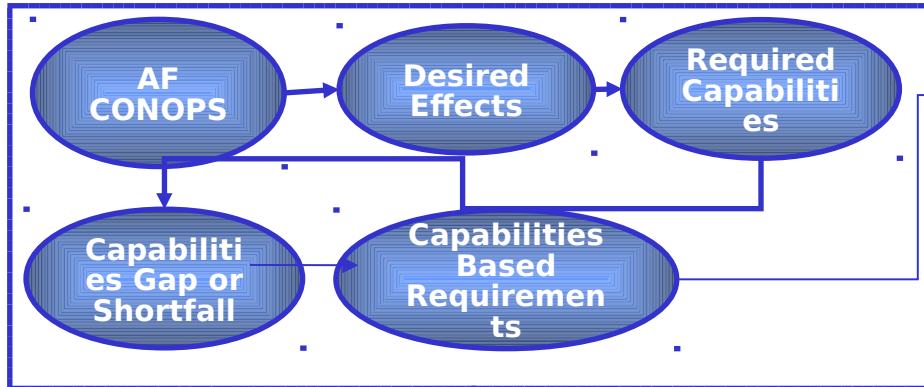
Seamless Verification Concept



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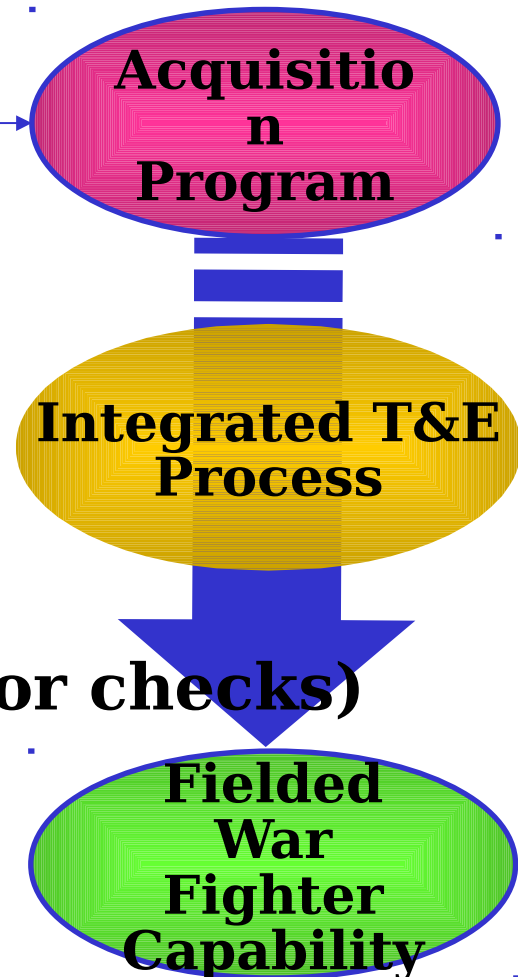
Capabilities-Based T&E

Requirements Process



Integrated T&E Purposes

- Reduce program risk
- Feedback to developer (vector checks)
- Refine requirements
- Verify capabilities achieved





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Evolution of T&E Approaches

Traditional (Past)



Combined Testing (Better)



Seamless Verification = Integrated Testing (New)

Tester Involvement in Requirements Development Process



entire T&E program **planned** as integrated "seamless" process from Day

As of:

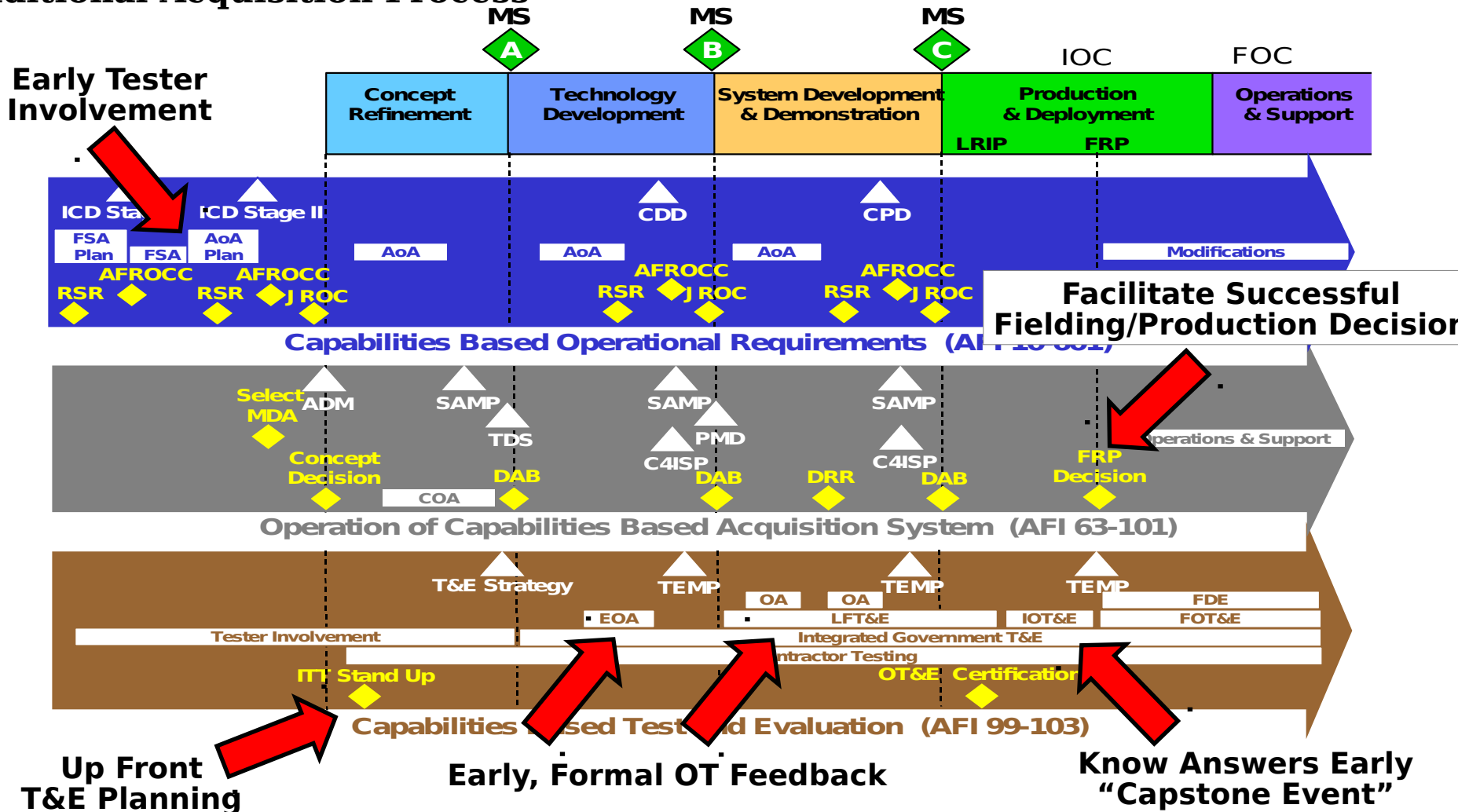
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Seamless Verification = Integrated Testing

Traditional Acquisition Process





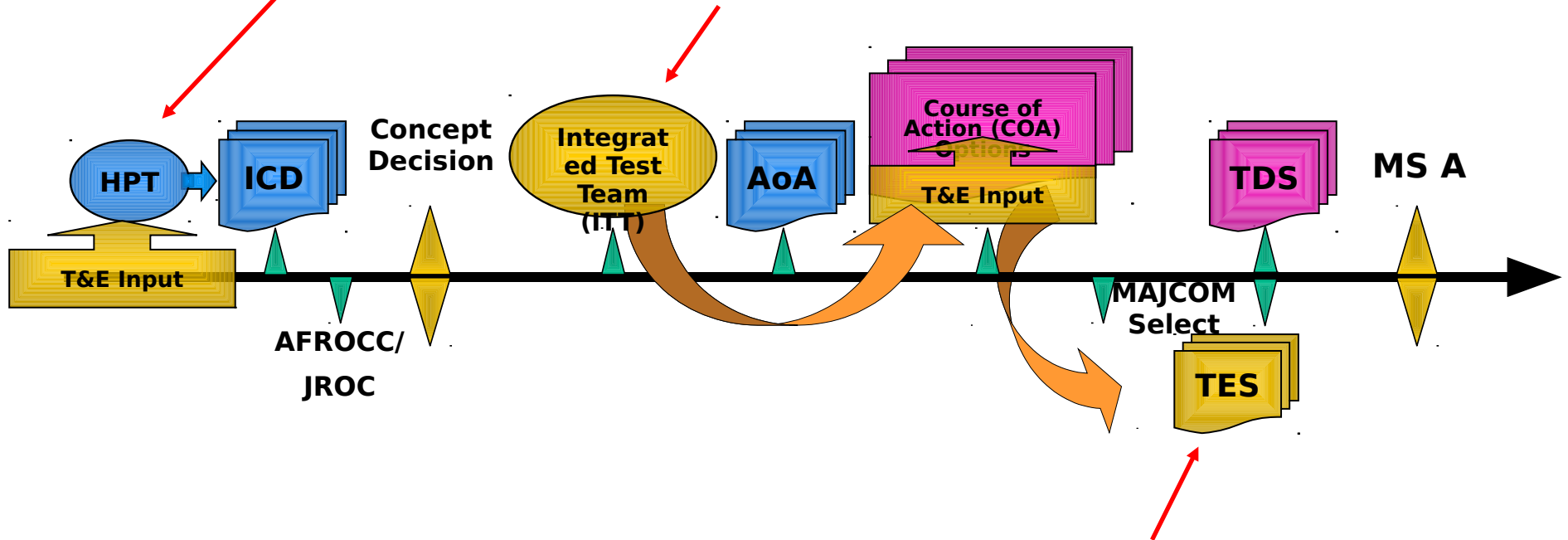
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Early Test Involvement

Pre-MS A: Concept Refinement

Shape testable requirements & identify potential test resources

- ADM-directed
- Chartered by PM
- All T&E stakeholders tasked to build TES



Early strategy to integrate T&E activities

- Resource & data sharing approach
- Plan for T&E to shape program direction



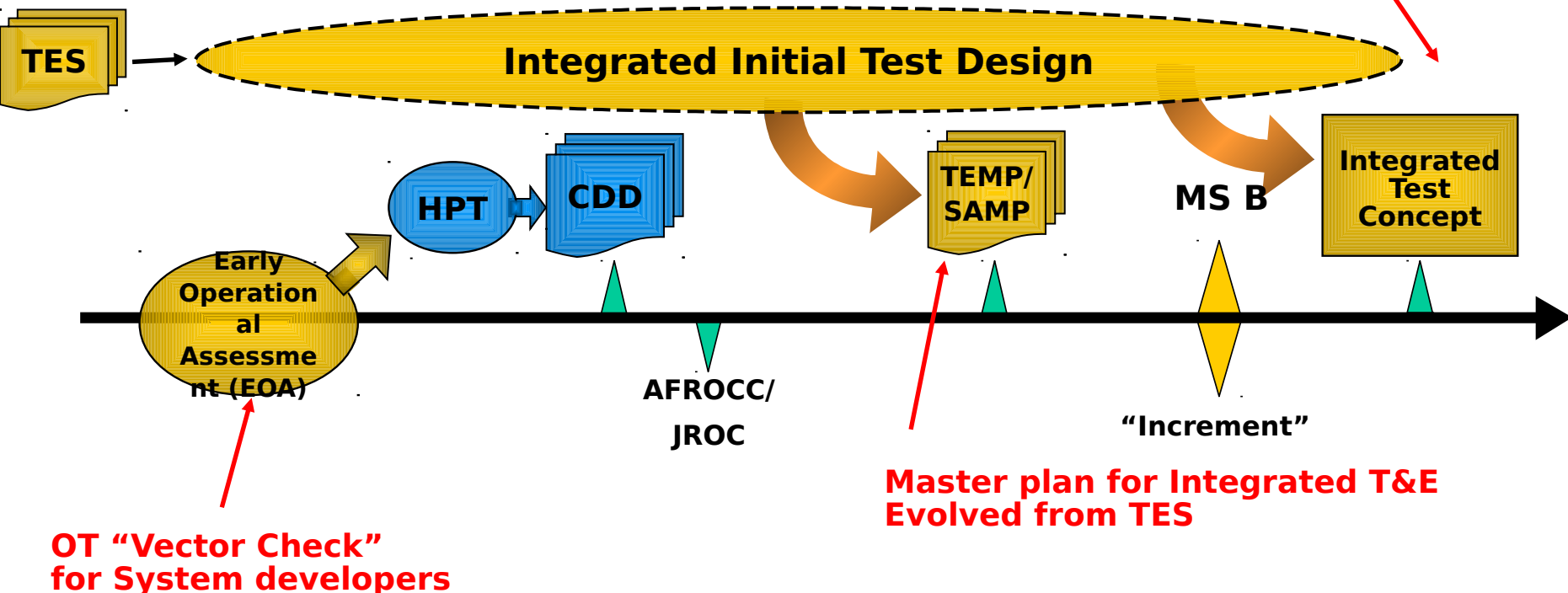
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Integrated Test Planning

MS A-B: Technology Development

Integrate test requirements from all testers as they become known

More detailed T&E flow, resource, & Data sharing plan

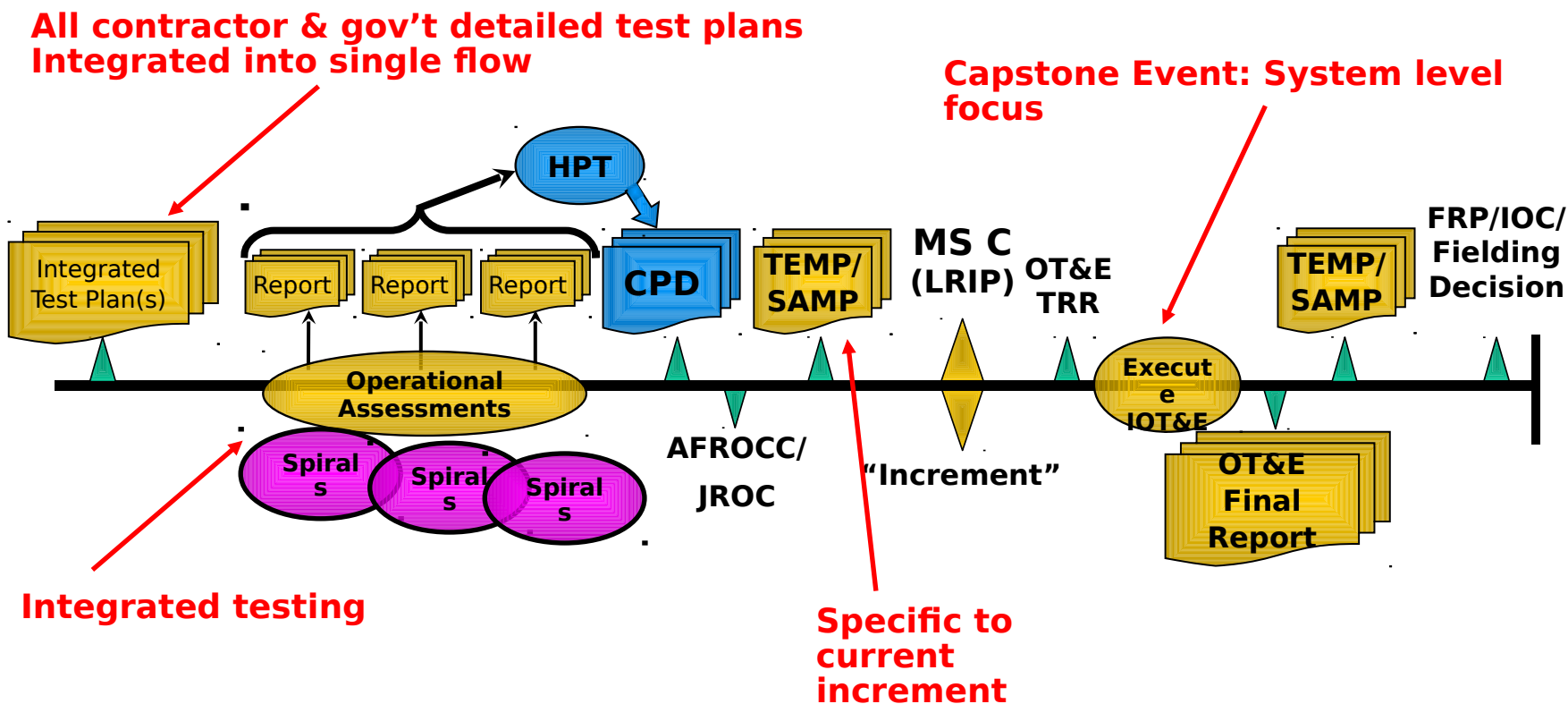




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Test Execution

MS B-C: System Dev & Sustainment





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Additional T&E Policy

Clarifications

- Clearly stated policy that **all AF systems require OT** prior to fielding
- **AFOTEC** established as required **first choice** to conduct all OT&E
- **MAJCOM-led OT** role in support of acquisition pgms clearly stated when AFOTEC is not involved
- Requires **MAJCOM T&E policy** implementing SV concepts for MAJCOM-managed system mod and sustainment programs





“Other” T&E Efforts

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- **AFI 99-103 Primary Focus:**
 - **Formal AF Acquisition Programs**

- **However, SV Concept Applies to ALL AF T&E Efforts**
 - **MAJCOM-managed acquisitions**
 - **Modification and sustainment programs (F1067 Mods)**

- **AFI 99-103 requires establishment of MAJCOM T&E policy**
 - **Should govern these “other” activities**
 - **Must be consistent with AFI 99-103 SV intent**



Next Steps

- **Sign AFI 99-103: Jun 04** (Currently out as Interim Guidance)

- **MAJCOMs and AFOTEC Implement Policies:**
 - AFMC AFMCI 99-103 Proposed
 - AFOTEC AFOTEC 99-103 In Revision
 - ACC ACCI 99-101 Minor Revisions?
 - AMC AMCI 99-101 In Revision
 - AFSPC AFPSCI 99-103 Proposed
 - AFSOC AFSOCI 99-103 In Revision
 - AETC AETC 99-103 Supp Proposed

- **AF T&E Guidebook (Summer 04)**
 - Companion to AFI 99-103 w/ additional info, templates, etc.



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Implementation Challenges

- **Very Early Tester Involvement: Pre-MS A / KDP-A**
 - **Tester support for requirements process (RSR, AoA, ICD)**
 - **ITT formation / T&E Strategy development**
- **“Integrated Test Design”**
 - **Clear stakeholder (CT, DT, OT, OSD, others) T&E requirements**
 - **Must bring to table early...and be prepared to integrate!**
- **Concurrent EA activities (Increments/Spirals)?**
 - **Multiple increments/spirals in test at once? Adequate T&E resources?**
- **Grandfathering: Gradual application to existing programs**



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Things to Remember

- **AFI 99-103 implements “Seamless Verification” concepts**
- **Early T&E involvement is a must do!**
- **Formal Integrated Test Team (ITT) required!**
 - **Integrated Test Design and data sharing from Day 1**
- **T&E Program (DT and OT) must shape system development and requirements refinement**

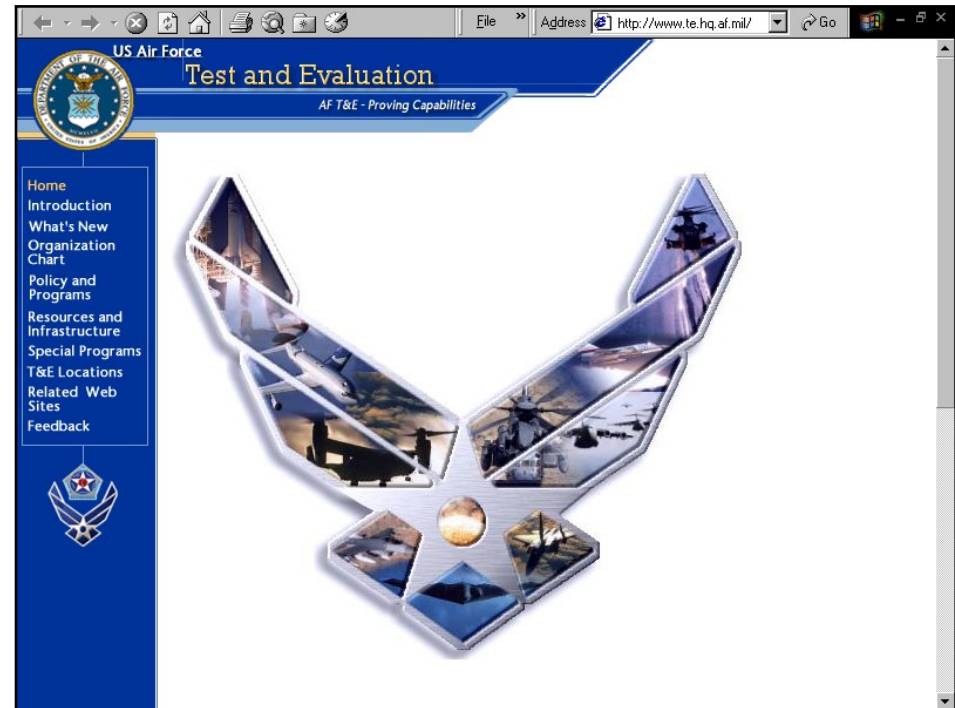
**All proven concepts—now adopted as
AF policy for ALL T&E programs**



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Guidance

- **DOD 5000.2, Operation of the Defense Acquisition System**
- **AFI 99-103, Capabilities Based Test and Evaluation (pending)**
- **AF T&E Guidebook (TBD)**
- **MAJCOM/AFOTEC Policy Documents**
- **AF/TE Website**
<http://www.te.hq.af.mil/>





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Questions?

Backup



AF T&E Policy POCs

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- **Air Staff:** Lt Col Sam Kyle, AF/TEP, DSN 227-0199
- **AFOTEC:** Lt Col Kevin Grill, AFOTEC/XPP, DSN 246-9507
- **AFMC:** Lt Col Dave Snyder, AFMC/DOX, DSN 986-0095
- **ACC:** Mr. Randy Galloway, ACC/DRPT, DSN 574-7597
- **AMC:** Mr. Chet Haines, AMC/TE, DSN 779-2046
- **AFSPC:** Lt Col Ratterree, AFPSC/XOTO, DSN 692-9840
(OT)
Maj Tim Howard, AFSPC/DR SEIO, DSN 692-5689 (DT)
- **AFSOC:** Mr. Dave Simpson, AFSOC/XPT, DSN 579-3667
- **AETC:** Lt Col Bud Brooks, AETC/XP, DSN 487-4555



Types of “Operational Testing”

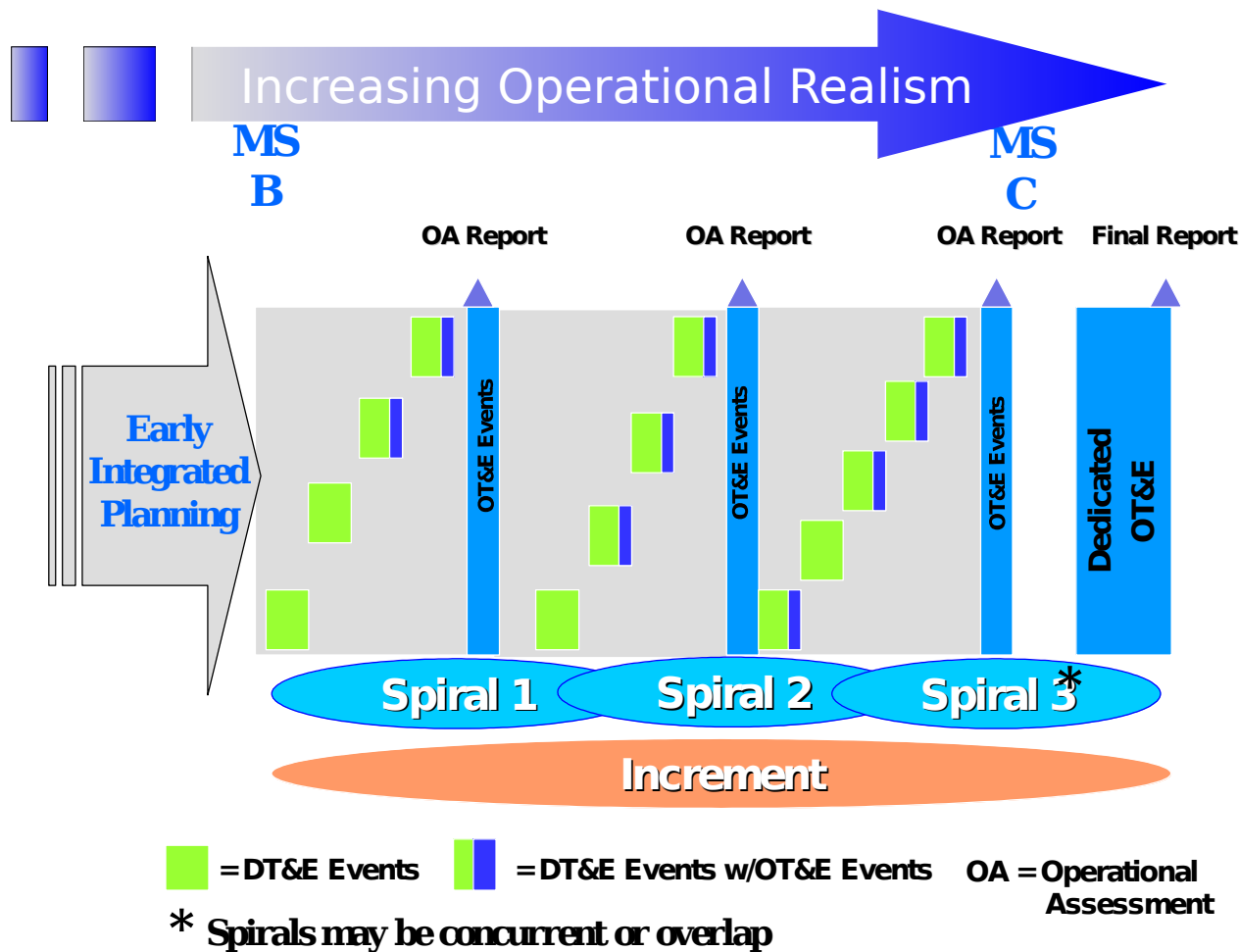
2.6.11. Summary of Operational Testing. The key distinctions between types of operational testing and the decisions that are supported are shown in **Table 2.1**. MAJCOMs will conduct OUEs or FDEs for programs requiring FRP or fielding decisions if AFOTEC elects not to conduct IOT&E, QOT&E, or FOT&E. The results of TD&Es are considered “fielded” when new TTPs are

Type of Operational Testing	ASSESSMENTS		EVALUATIONS	
	EOA, IOT&E, QOT&E	FOT&E	OUE	FDE, TD&E, WSEP
Who Conducts	All	AFOTEC	All	MAJCOM
Type Program	All	ACAT I, II, III, OSD T&E Oversight	ACAT III, AF Fm 1067 mods	ACAT III, AF Form 1067 mods
Decision Supported	EOA: MS B OA: MS C, LRIP	FRP, Fielding	FRP, Fielding	FRP, Fielding



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Test in Evolutionary Acquisition



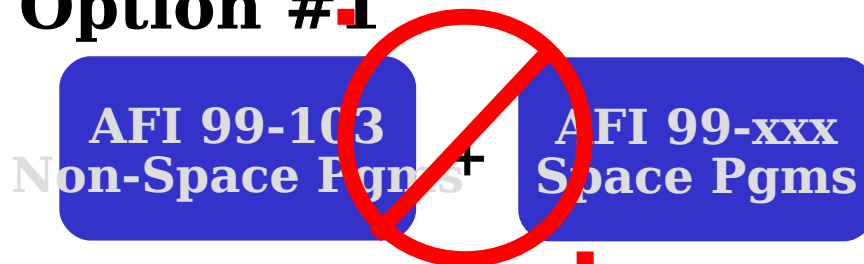
- Spirals occur w/in increments
- DT/OT and OAs give vector check to developers
- Flexible capabilities content = flexible test plans
- Potentially resource intensive



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Space Test Policy Options Considered

Option #1



Option #2



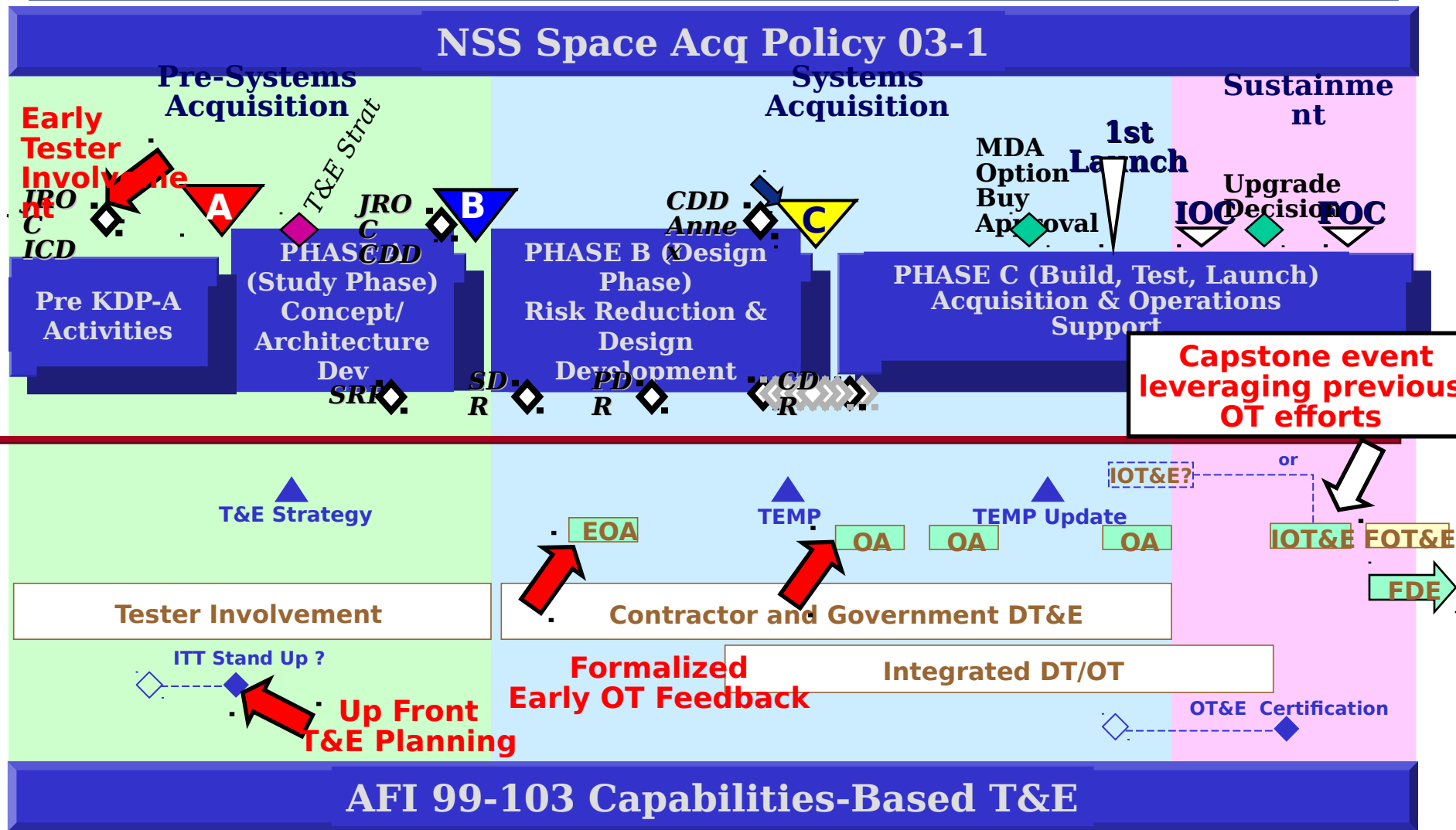
Option #3





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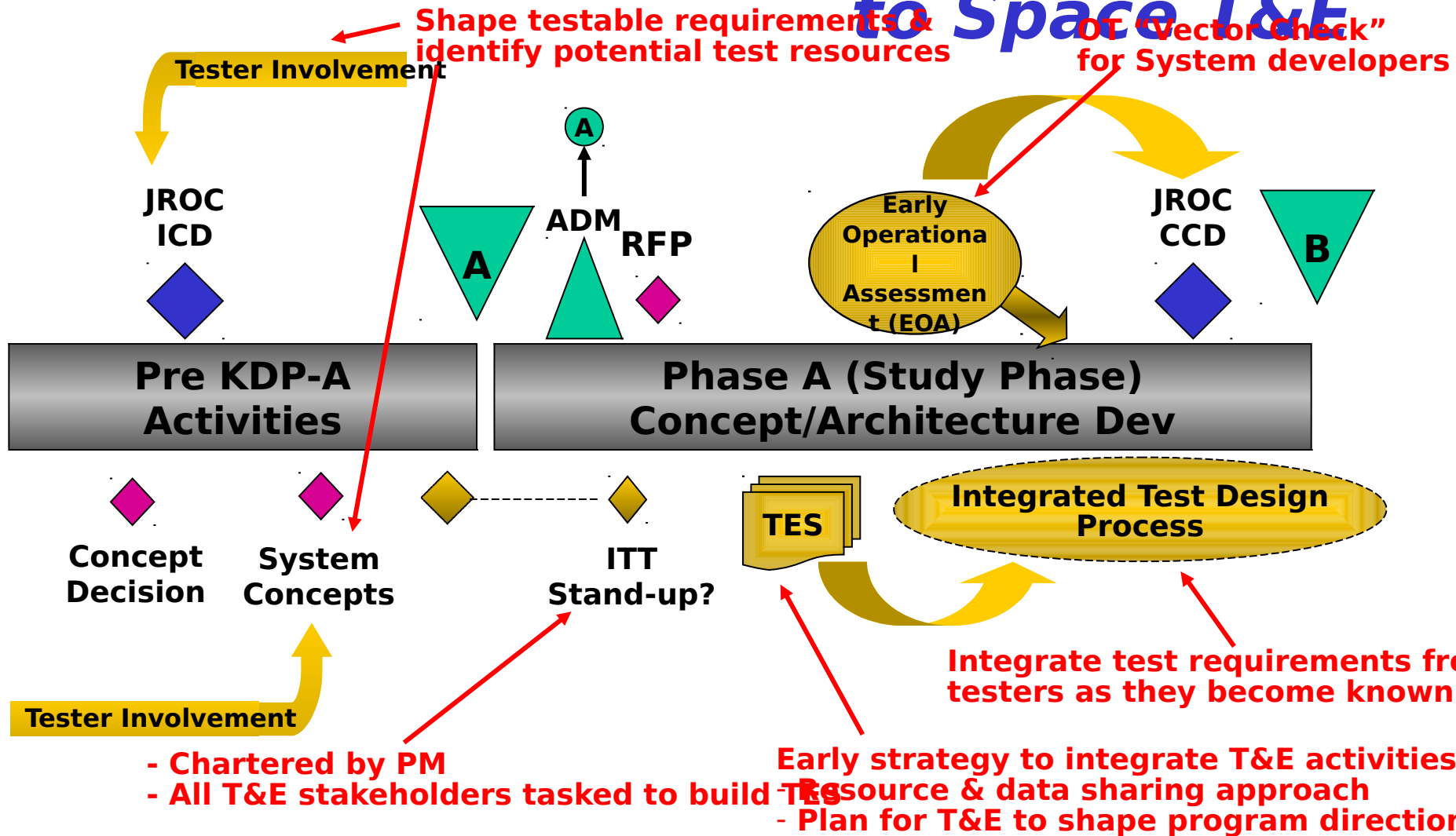
Seamless Verification Applied to Small Qty Space Pgms





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AFI 99-103 Notional Application to Space T&E





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